



Application No. 09/914,765  
Attorney Docket No. 60123.0000002  
Confirmation No.: 4417

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of: )  
CHRISTENSEN, Preben et al. )  
Serial No.: 09/914,765 ) Group Art Unit: 1651  
Filed: September 5, 2001 ) Examiner: Sandra SAUCIER

For: DETERMINATION OF SPERM CONCENTRATION AND VIABILITY FOR  
ARTIFICIAL INSEMINATION

**SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents  
Alexandria, VA 22313-1450

Sir:

In accordance with 37 C.F.R. §§ 1.97 and 1.98, and in compliance with the duty of disclosure set forth in 37 C.F.R. § 1.56, applicants are submitting herewith copies of the references listed on the attached Form PTO/SB/08A for consideration and to be made of record herein by the U.S. Patent and Trademark Office in the above-captioned application.

Consideration of the foregoing plus the prompt return of a copy of the enclosed Form PTO/SB/08A with the Examiner's initials in the left column in accordance with MPEP 609 are respectfully requested.

Applicants' submission of the Information Disclosure Statement shall not be construed as an admission that the cited references are prior art to the present invention, or that the cited references qualify as printed publications. The submission of this IDS also shall not be construed as a representation that a prior art search has been performed.

In accordance with 37 C.F.R. § 1.97(c), this Supplemental Information Disclosure Statement is following a non-final Office Action. Therefore, the fee of \$180.00 is enclosed for consideration of this information. However, in the event of a fee discrepancy, the Commissioner is authorized to charge the undersigned's Deposit Account No. 50-0206.



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Respectfully submitted,

HUNTON & WILLIAMS

Dated: August 13, 2003 By: [Signature]  
Stanislaus Aksman  
Registration No. 28,562

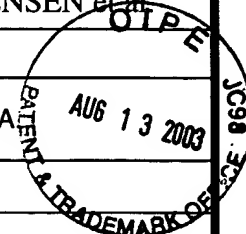
Jeffrey T. Perez  
Registration No. 52,110

HUNTON & WILLIAMS  
1900 K Street, N.W., Suite 1200  
Washington, DC 20006-1109  
Tel: (202) 955-1500  
Fax: (202) 778-2201

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(use as many sheets as necessary)</i>				Substitute for form 1449A/PTO		Application Number		09/914,765			
						Filing Dat		September 5, 2001			
						First Named Inv nt r		Preben CHRISTENSEN et al.			
						Art Unit		1651			
						Examiner Name		SAUCIER, Sandra A.			
Sh t		1		of		3		Attorney Docket Number		60123.000002	
<b>OTHER DOCUMENTS - NON-PATENT LITERATURE DOCUMENTS</b>											
*Examiner Initials		Cite No.		Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published						TRANSLATION	
										YES      NO	
		1.		Donoghue AM, Garner DL, Donoghue DJ, Johnson LA, 1995: Viability Assessment of Turkey Sperm Using Fluorescent Staining and Flow Cytometry. Poultry Sci, 74:1191-1200.						<input type="checkbox"/> <input type="checkbox"/>	
		2.		Donoghue AM, Thistlethwaite D, Donoghue DJ, Kirby JD, 1996: A New Method for Rapid Determination of Sperm Concentration in Turkey Semen. Poultry Sci., 75:785-789.						<input type="checkbox"/> <input type="checkbox"/>	
		3.		Dumont P, Coupet H, Gary F, 1996: Some aspects of evaluation of semen quality and processing in France. Proc. 8th European AI-Vets meeting.						<input type="checkbox"/> <input type="checkbox"/>	
		4.		Evenson DP, Parks JE, Kaproth MT, Jost LK, 1993: Rapid Determination on Sperm Cell Concentration in Bovine Semen by Flow Cytometry. J Dairy Sci 76:86-94.						<input type="checkbox"/> <input type="checkbox"/>	
		5.		Fenton SE, Ax RL, Cowan CM, Coyle T, Gilbert GR, Lenz RW: Validation and Application of an Assay of Deocytiribonucleic Acid to Estimate Concentrations of Bull Sperm. J. Dairy Sci., 73:3118-3125.						<input type="checkbox"/> <input type="checkbox"/>	
		6.		Foote RH, 1972: How to Measure Sperm Cell Concentration by Turbidity (Optical Density). Proceedings 4th Techn. Conf. on Anim. Reprod. and AI, NAAB, pp. 2-6.						<input type="checkbox"/> <input type="checkbox"/>	
		7.		Garner DL, Johnson LA, Yue ST, Roth BL, Haugland RP, 1994: Dual DNA Staining Assessment of Bovine Sperm Viability Using SYBR-14 and Propidium Iodide. J Androl, 15:620-629.						<input type="checkbox"/> <input type="checkbox"/>	
		8.		Garner DL and Johnson LA, 1995: Viability Assessment of Mammalian Sperm Using SYBR-14 and Propidium Iodide. Biol Reprod, 53:276-284.						<input type="checkbox"/> <input type="checkbox"/>	
		9.		Garner DL, Dobrinsky JR, Welch GR, Johnson LA, 1996a: Porcine Sperm Viability, Oocyte Fertilization and Embryo Development after Staining Spermatozoa with SYBR-14. Theriogenology, 45:1103-1113.						<input type="checkbox"/> <input type="checkbox"/>	
		10.		Garner DL, Johnson LA, Allen CH, Palencia DD, Chambers CS, 1996b: Comparison of Seminal Quality in Holstein Bulls as Yearlings and as Mature Sires. Theriogenology, 45:923-934.						<input type="checkbox"/> <input type="checkbox"/>	
		11.		Garner DL, Thomas CA, Joerg HW, DeJarnette JM, Marshall CE, 1997a: Fluorometric Assessments of Mitochondrial Function and Viability in Cryopreserved Bovine Spermatozoa. Biol Reprod, 57:1401-1406.						<input type="checkbox"/> <input type="checkbox"/>	
EXAMINER SIGNATURE								DATE CONSIDERED			
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.											



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		<b>Examiner Name</b>	SAUCIER, Sandra A		
<b>She t</b>	2	<b>of</b>	3	<b>Attorney Docket Number</b>	60123.000002



### OTHER DOCUMENTS - NON-PATENT LITERATURE DOCUMENTS

*Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	TRANSLATION	
			YES	NO
	12.	Garner DL, Thomas CA, Allen CH, 1997b: Effect of Semen Dilution on Bovine Sperm Viability as Determined by Dual-DNA Staining and Flow Cytometry. J Androl, 18:324-331.	<input type="checkbox"/>	<input type="checkbox"/>
	13.	Garner DL, Thomas CA, Allen CH, Sasser RG, 1997c: Effect of Cryopreservation on Bovine Sperm Viability as Determined by Dual DNA Staining. Reprod Domest Anim, 32:279-283.	<input type="checkbox"/>	<input type="checkbox"/>
	14.	Maxwell WM and Johnson LA, 1997: Chlortetracycline Analysis of Boar Spermatozoa After Incubation, Flow Cytometric Sorting, Cooling, or Cryopreservation. Mol Reprod Dev, 46:408-418.	<input type="checkbox"/>	<input type="checkbox"/>
	15.	Maxwell WM, Welch GR, Johnson LA, 1997: Viability and Membrane Integrity of Spermatozoa after Dilution and Flow Cytometric Sorting in the Presence or Absence of Seminal Plasma. Reprod Fertil Dev, 8:1165-78.	<input type="checkbox"/>	<input type="checkbox"/>
	16.	Parks JE, Ehrenwald E, Foote RH, 1985: Counting mammalian spermatozoa in biological fluids containing particulate matter. J. Dairy Sci., 68:2329.	<input type="checkbox"/>	<input type="checkbox"/>
	17.	Penfold LM, Garner DL, Donoghue AM, Johnson LA, 1997: Comparative Viability of Bovine Sperm Frozen on a Cryomicroscope or in Straws. Theriogenology, 47:521-530.	<input type="checkbox"/>	<input type="checkbox"/>
	18.	Songsasen N, Betteridge KJ, Leibo SP, 1997: Birth of Live Mice Resulting from Oocytes Fertilized In Vitro with Cryopreserved Spermatozoa. Biol Reprod, 56:143-152.	<input type="checkbox"/>	<input type="checkbox"/>
	19.	Szollosi J, Takacs T, Balazs M, Gaspar R, Matyus L, Szabo G, Tron L, Resli I, Dajanovich S, 1986: Flow-cytometric evaluation of bull semen. 1. Objective determination of sperm cell counts in diluted semen samples. Magyar Allatorvosok Lapja, 41:459-463.	<input type="checkbox"/>	<input type="checkbox"/>
	20.	Takacs T, Szollosi J, Balazs M, Gaspar R, Matyus L, Szabo G, Tron L, Resli I, Damjanovich S: Flow cytometric determination of the sperm cell number in diluted bull semen samples by DNA staining method. Acta. Bichim. Biophys. Hung., 22:45-57.	<input type="checkbox"/>	<input type="checkbox"/>
	21.	Takizawa S, Katoh C, Fukatsu N, Horii I, 1994: Evaluation of rat sperm viability and number by flow cytometry. Teratology, 50:40B.	<input type="checkbox"/>	<input type="checkbox"/>
	22.	Takizawa S, Katoh C, Fukatsu N, Horii I, 1995: Flow Cytometric Analysis for the Evaluation of the Rat Sperm Viability and Number in the Male Reproductive Toxicity Studies. Cong. Anom, 35:177-187.	<input type="checkbox"/>	<input type="checkbox"/>

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		Filing Date		September 5, 2001	
		First Named Inventor		Preben CHRISTENSEN et al.	
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		Examiner Name		SAUCIER, Sandra A.	
Sheet	3	of	3	Attorney Docket Number 60123.000002	
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			YES	NO	
	23.	Takizawa S, Katoh C, Inomata A, Horii I, 1998: Flow cytometric analysis for sperm viability and counts in rats treated with trimethylphosphate or pyridoxine. J. Toxicol. Sci. 23:15-23.	<input type="checkbox"/>	<input type="checkbox"/>	
	24.	Thomas CA, Garner DL, DeJarnette JM, Marshall CE, 1997: Fluorometric Assessments of Acrosomal Integrity and Viability in Cryopreserved Bovine Spermatozoa. Reprod Biol, 56:991-998.	<input type="checkbox"/>	<input type="checkbox"/>	
	25.	Thomas CA, Garner DL, DeJarnette JM, Marshall CE, 1998: Effect of Cryopreservation on Bovine Sperm Organelle Function and Viability As Determined by Flow Cytometry. Biol Reprod, 58:786-793.	<input type="checkbox"/>	<input type="checkbox"/>	
	26.	Vetter CM, Miller JE, Crawford LM, Armstrong MJ, Clair JH, Conner MW, Wise DL, Skopek TR, 1998: Comparison of motility and membrane integrity to assess rat sperm viability. Reprod Toxicol, 12:105-114.	<input type="checkbox"/>	<input type="checkbox"/>	
	27.	Woelders H, 1990: Overview of in vitro methods for evaluation of semen quality. Boar Semen Preservation II, Reprod. Domest. Anim, Suppl 1: 145-164.	<input type="checkbox"/>	<input type="checkbox"/>	
	28.	Yamamoto T, Mori S, Yoneyama M, Imanishi M, Takeuchi M, 1996: Estimation of rat sperm with flow cytometer (FCM): simultaneous analysis of sperm number and sperm viability. Teratology, 54:38A.	<input type="checkbox"/>	<input type="checkbox"/>	
	29.	Chalah T, Brillard JP, 1998: Comparison of assessment of fowl sperm viability by eosin-nigrosin and dual fluorescence (SYBR-14/PI). Theriogenology, 50:487-493.	<input type="checkbox"/>	<input type="checkbox"/>	
	30.	Amann RP, 1989: Can the fertility potential of a seminal sample be predicted accurately? J Androl 10, 89-98.	<input type="checkbox"/>	<input type="checkbox"/>	
	31.	Budworth PR, Amann RP, Chapman PL, 1988: Relationships between computerized measurement of motion of frozen-thawed bull spermatozoa and fertility. J Androl 9, 41-54.	<input type="checkbox"/>	<input type="checkbox"/>	
	32.	Christensen P, Stryhn H, 1997: Time-dependent bias in the assessment of bull semen by computer-aided sperm analysis. Biol Reprod 56, Suppl 1, 173.	<input type="checkbox"/>	<input type="checkbox"/>	
	33.	Christensen P, Brockhoff PB, Lehn-Jensen H, 1999: The Relationship between Semen Quality and the Nonreturn Rate of bulls. Reprod Dom Anim 34, 503-507.			
	34.	Barth AD, Oko RJ, 1989: Abnormal Morphology of Bovine Spermatozoa. 1st edition, Iowa State University Press, pp 160-163.	<input type="checkbox"/>	<input type="checkbox"/>	
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